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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-2022-09-30-36** **Date: 27-06-2022**
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	25-06-2022
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	25-06-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	11.4%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	13.5%	
Combined Flakiness and Elongation Index for WMM	24.9%	

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 06/07/2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kanmanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer's Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	01-07-2022
Customer ID	:	Cement Concrete Pavement- Saraipalya Cross Road -1
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	06/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement-Saraipalya Cross Road -1	M30	29/06/2022	06/07/2022	151.11 X 151.26 X 150.66	22856	8.815	593.1	26.0	25.6
2	Cement Concrete Pavement-Saraipalya Cross Road -1	M30	29/06/2022	06/07/2022	150.28 X 149.73 X 151.29	22501	8.479	588.3	26.1	
3	Cement Concrete Pavement-Saraipalya Cross Road -1	M30	29/06/2022	06/07/2022	149.61 X 151.97 X 151.05	22736	8.865	563.3	24.8	

* The results obtained are satisfactory as per standard requirements.

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ಬಿಬಿಎಂಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 27/07/2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer's Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	01-07-2022
Customer ID	:	Cement Concrete Pavement- Saraipalya Cross Road -1
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	27/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement- Saraipalya Cross Road -1	M30	29/06/2022	27/07/2022	149.84 X 150.04 X 151.76	22482	8.325	764.2	34.0	33.3
2	Cement Concrete Pavement- Saraipalya Cross Road -1	M30	29/06/2022	27/07/2022	149.05 X 150.63 X 150.55	22452	8.913	731.4	32.6	
3	Cement Concrete Pavement- Saraipalya Cross Road -1	M30	29/06/2022	27/07/2022	150.25 X 149.39 X 151.51	22446	8.207	745.4	33.2	

* The results obtained are satisfactory as per standard requirements.

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ವ್ಯಾಪ್ತಿರಾಯನಪುರ ಉಪ ವಿಭಾಗ
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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 06/07/2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd. No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer's Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	01-07-2022
Customer ID	:	Cement Concrete Pavement- Saraipalya Cross Road -1
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	06/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement- Saraipalya Cross Road -1	M30	29/06/2022	06/07/2022	150.28 X 149.89 X 151.59	22525	8.968	583.0	25.9	25.4
2	Cement Concrete Pavement- Saraipalya Cross Road -1	M30	29/06/2022	06/07/2022	150.45 X 149.53 X 149.40	22497	8.482	585.8	26.0	
3	Cement Concrete Pavement- Saraipalya Cross Road -1	M30	29/06/2022	06/07/2022	151.74 X 151.01 X 149.10	22914	8.822	552.8	24.1	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-30-36 **Date: 27/07/2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer's Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 01-07-2022

Customer ID : Cement Concrete Pavement- Saraipalya Cross Road -1

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 27/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement-Saraipalya Cross Road -1	M30	29/06/2022	27/07/2022	151.30 X 151.77 X 150.24	22964	8.648	775.2	33.8	33.2
2	Cement Concrete Pavement-Saraipalya Cross Road -1	M30	29/06/2022	27/07/2022	149.68 X 150.26 X 151.39	22491	8.110	719.8	32.0	
3	Cement Concrete Pavement-Saraipalya Cross Road -1	M30	29/06/2022	27/07/2022	151.51 X 151.47 X 149.16	22950	8.391	776.9	33.9	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-30-36 **Date: 06/07/2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyaranagar, Bangalore-43

Customer's Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 01-07-2022

Customer ID : Cement Concrete Pavement- Saraipalya Cross Road -2

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 06/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement-Saraipalya Cross Road -2	M30	29/06/2022	06/07/2022	149.83 X 151.79 X 149.74	22743	8.616	585.0	25.7	25.8
2	Cement Concrete Pavement-Saraipalya Cross Road -2	M30	29/06/2022	06/07/2022	149.96 X 151.09 X 149.76	22657	9.071	607.9	26.8	
3	Cement Concrete Pavement-Saraipalya Cross Road -2	M30	29/06/2022	06/07/2022	150.10 X 150.59 X 150.15	22603	8.573	558.7	24.7	

* The results obtained are satisfactory as per standard requirements.

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CIVIL Pro Sig. Date. BANGALORE

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-30-36 **Date: 27/07/2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer's Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 01-07-2022

Customer ID : Cement Concrete Pavement- Saraipalya Cross Road -2

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 27/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Cement Concrete Pavement- Saraipalya Cross Road -2	M30	29/06/2022	27/07/2022	150.05 X 149.53 X 149.60	22437	9.084	747.1	33.3	33.0
2	Cement Concrete Pavement- Saraipalya Cross Road -2	M30	29/06/2022	27/07/2022	150.58 X 149.58 X 149.98	22524	8.977	732.3	32.5	
3	Cement Concrete Pavement- Saraipalya Cross Road -2	M30	29/06/2022	27/07/2022	151.14 X 150.95 X 150.07	22816	8.524	756.8	33.2	

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-30-36 **Date: 06/07/2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd. No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer's Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 01-07-2022

Customer ID : Cement Concrete Pavement- Saraipalya Cross Road -2

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 06/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement- Saraipalya Cross Road -2	M30	29/06/2022	06/07/2022	150.41 X 149.35 X 151.68	22463	9.065	574.7	25.6	25.4
2	Cement Concrete Pavement- Saraipalya Cross Road -2	M30	29/06/2022	06/07/2022	149.13 X 149.24 X 150.07	22256	8.738	592.5	26.6	
3	Cement Concrete Pavement- Saraipalya Cross Road -2	M30	29/06/2022	06/07/2022	149.80 X 150.64 X 150.06	22565	8.864	542.7	24.1	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 27/07/2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer's Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	01-07-2022
Customer ID	:	Cement Concrete Pavement- Saraipalya Cross Road -2
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	27/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement-Saraipalya Cross Road -2	M30	29/06/2022	27/07/2022	151.36 X 151.23 X 149.67	22890	8.805	768.7	33.6	33.4
2	Cement Concrete Pavement-Saraipalya Cross Road -2	M30	29/06/2022	27/07/2022	150.11 X 150.60 X 150.52	22607	8.497	745.5	33.0	
3	Cement Concrete Pavement-Saraipalya Cross Road -2	M30	29/06/2022	27/07/2022	150.73 X 151.95 X 149.46	22904	8.655	772.9	33.7	

* The results obtained are satisfactory as per standard requirements.

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CIVIL Pro BANGALORE Sig. Date.

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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 07/07/2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer's Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	02-07-2022
Customer ID	:	Cement Concrete Pavement- Saraipalya Cross Road -3
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	07/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement-Saraipalya Cross Road -3	M30	30/06/2022	07/07/2022	149.70 X 151.63 X 151.94	22700	8.123	581.3	25.6	25.3
2	Cement Concrete Pavement-Saraipalya Cross Road -3	M30	30/06/2022	07/07/2022	149.37 X 149.70 X 150.93	22361	8.456	581.5	26.0	
3	Cement Concrete Pavement-Saraipalya Cross Road -3	M30	30/06/2022	07/07/2022	150.92 X 150.10 X 151.85	22653	8.433	553.2	24.4	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-30-36 **Date: 29/07/2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer's Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 02-07-2022

Customer ID : Cement Concrete Pavement- Saraipalya Cross Road -3

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 28/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	28/07/2022	149.40 X 150.84 X 150.69	22536	8.680	751.7	33.4	33.3
2	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	28/07/2022	151.04 X 149.38 X 150.13	22563	8.849	737.3	32.7	
3	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	28/07/2022	150.23 X 150.22 X 149.73	22568	8.661	762.5	33.8	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 07/07/2022

Lab ID : CP-2022-09-30-36

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer's Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 02-07-2022

Customer ID : Cement Concrete Pavement- Saraipalya Cross Road -3

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 07/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	07/07/2022	151.92 X 150.27 X 150.07	22828	8.458	570.9	25.0	25.3
2	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	07/07/2022	151.81 X 149.04 X 151.26	22626	8.597	592.2	26.2	
3	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	07/07/2022	150.30 X 151.06 X 151.36	22704	8.445	563.8	24.8	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 28/07/2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer's Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	02-07-2022
Customer ID	:	Cement Concrete Pavement- Saraipalya Cross Road -3
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	28/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	28/07/2022	149.68 X 149.71 X 151.23	22409	8.439	753.9	33.6	33.3
2	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	28/07/2022	149.25 X 149.04 X 150.93	22244	8.749	732.6	32.9	
3	Cement Concrete Pavement- Saraipalya Cross Road -3	M30	30/06/2022	28/07/2022	150.49 X 150.48 X 149.41	22647	8.384	754.0	33.3	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT FOR SAND MASONRY MORTARS

Lab ID : CP-2022-09-30-36 **Date: 07-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer's Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 04-07-2022

Sample Type : Fine Aggregate, M.Sand for Mortar

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2116-1980 (RA-2007) (Specification for Sand for Masonry Mortars)
IS: 2386 :1963(Part - 1, 3) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 04-07-2022

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS: 2116-1980 (RA-2007)
1	4.75 mm	0	0	0	100	100
2	2.36 mm	55	55	5.5	94.5	90-100
3	1.18 mm	201	256	25.6	74.4	70-100
4	600 micron	152	408	40.8	59.2	40-100
5	300 micron	142	550	55.0	45.0	5-70
6	150 micron	358	908	90 8	9.2	0-15
7	Pan	92	1000	100.0	0.0	0

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TEST REPORT FOR SAND MASONRY MORTARS

Lab ID : CP-2022-09-30-36 **Date: 07-07-2022**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	2.59	–
2	Specific Gravity	2.54	–
3	Material finer than 75 micron(%)	9.8	Crushed Fine aggregate Max 15%
4	Compacted Bulk Density (Kg/litre)	1.92	–
5	Loose Bulk Density (Kg/litre)	1.76	–

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR GSB
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : CP-RW-2022-09-30-36 **Date: 07-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 05-07-2022

Type of Mix : GSB (Granular Sub Base)

Date of test : 05-07-2022

Oven Dry Weight : 10000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec. Limit Vide Table 400.1 MORTH Specification
75	0	0	0.0	100.0	100
53	997	997	10.0	90.0	80-100
26.5	2245	3242	32.4	67.6	55-90
9.5	1285	4527	45.3	54.7	35-65
4.75	1701	6228	62.3	37.7	25-50
2.36	1923	8151	81.5	18.5	10-20
0.85	1321	9472	94.7	5.3	2-10
0.425	125	9597	96.0	4.0	0-5

TESTS ON FILLER SCREEN MATERIALS

Sl no	Particulars	Test results	Spec.Limit Vide Table
1	Liquid Limit, %	22.33%	Maximum 25
2	Plasticity index, %	Non plastic	Maximum 6

* The results obtained are satisfactory as per standard requirements.

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ಜಿ.ಬಿ.ಎಸ್., ಬೆಂಗಳೂರು-26 ಜಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

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TEST RESULTS OF GRADATION FOR GSB
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : CP-RW-2022-09-30-36 **Date: 07-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 05-07-2022

Type of Mix : GSB (Granular Sub Base)

Date of test : 05-07-2022

Oven Dry Weight : 10000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec. Limit Vide Table 400.1 MORTH Specification
75	0	0	0.0	100.0	100
53	950	950	9.5	90.5	80-100
26.5	2215	3165	31.7	68.4	55-90
9.5	1275	4440	44.4	55.6	35-65
4.75	1945	6385	63.9	36.2	25-50
2.36	1785	8170	81.7	18.3	10-20
0.85	1250	9420	94.2	5.8	2-10
0.425	308	9728	97.3	2.7	0-5

TESTS ON FILLER SCREEN MATERIALS

Sl no	Particulars	Test results	Spec.Limit Vide Table
1	Liquid Limit, %	21.25%	Maximum 25
2	Plasticity index, %	Non plastic	Maximum 6

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR GSB
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : CP-RW-2022-09-30-36 **Date: 07-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kaminanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 05-07-2022

Type of Mix : GSB (Granular Sub Base)

Date of test : 05-07-2022

Oven Dry Weight : 10000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec. Limit Vide Table 400.1 MORTH Specification
75	0	0	0.0	100.0	100
53	869	869	8.7	91.3	80-100
26.5	2142	3011	30.1	69.9	55-90
9.5	1302	4313	43.1	56.9	35-65
4.75	1289	5602	56.0	44.0	25-50
2.36	2802	8404	84.0	16.0	10-20
0.85	1044	9448	94.5	5.5	2-10
0.425	257	9705	97.1	3.0	0-5

TESTS ON FILLER SCREEN MATERIALS

Sl no	Particulars	Test results	Spec.Limit Vide Table
1	Liquid Limit, %	22.02%	Maximum 25
2	Plasticity index, %	Non plastic	Maximum 6

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	310	310	2.8	97.2	95-100
22.4	2144	2454	22.3	77.7	60-80
11.2	2221	4675	42.5	57.5	40-60
4.75	2219	6894	62.7	37.3	25-40
2.36	1995	8889	80.8	19.2	15-30
0.6	1098	9987	90.8	9.2	8-22
0.075	602	10589	96.3	3.7	0-5

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Date: 14-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	11-07-2022
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	11-07-2022
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	245	245	2.2	97.8	95-100
22.4	2247	2492	22.7	77.3	60-80
11.2	2348	4840	44.0	56.0	40-60
4.75	2014	6854	62.3	37.7	25-40
2.36	2001	8855	80.5	19.5	15-30
0.6	1101	9956	90.5	9.5	8-22
0.075	498	10454	95.0	5.0	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-26

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	235	235	2.1	97.9	95-100
22.4	2245	2480	22.5	77.5	60-80
11.2	2198	4678	42.5	57.5	40-60
4.75	2145	6823	62.0	38.0	25-40
2.36	2069	8892	80.8	19.2	15-30
0.6	1042	9934	90.3	9.7	8-22
0.075	701	10635	96.7	3.3	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-26

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Quality Manager

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	307	307	2.8	97.2	95-100
22.4	2175	2482	22.6	77.4	60-80
11.2	2075	4557	41.4	58.6	40-60
4.75	2215	6772	61.6	38.4	25-40
2.36	1859	8631	78.5	21.5	15-30
0.6	1102	9733	88.5	11.5	8-22
0.075	875	10608	96.4	3.6	0-5

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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Certificate No.: TC-5548

TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	298	298	2.7	97.3	95-100
22.4	2269	2567	23.3	76.7	60-80
11.2	2245	4812	43.7	56.3	40-60
4.75	2319	7131	64.8	35.2	25-40
2.36	1798	8929	81.2	18.8	15-30
0.6	1025	9954	90.5	9.5	8-22
0.075	601	10555	96.0	4.0	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-26

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Quality Manager

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Certificate No.: TC-5548

TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	326	326	3.0	97.0	95-100
22.4	2269	2595	23.6	76.4	60-80
11.2	2159	4754	43.2	56.8	40-60
4.75	2048	6802	61.8	38.2	25-40
2.36	2001	8803	80.0	20.0	15-30
0.6	1102	9905	90.0	10.0	8-22
0.075	702	10607	96.4	3.6	0-5

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	326	326	3.0	97.0	95-100
22.4	2269	2595	23.6	76.4	60-80
11.2	2159	4754	43.2	56.8	40-60
4.75	2048	6802	61.8	38.2	25-40
2.36	2001	8803	80.0	20.0	15-30
0.6	1102	9905	90.0	10.0	8-22
0.075	702	10607	96.4	3.6	0-5

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	298	298	2.7	97.3	95-100
22.4	2232	2530	23.0	77.0	60-80
11.2	2301	4831	43.9	56.1	40-60
4.75	2098	6929	63.0	37.0	25-40
2.36	2001	8930	81.2	18.8	15-30
0.6	1058	9988	90.8	9.2	8-22
0.075	689	10677	97.1	2.9	0-5

* The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	298	298	2.7	97.3	95-100
22.4	2211	2509	22.8	77.2	60-80
11.2	2115	4624	42.0	58.0	40-60
4.75	2098	6722	61.1	38.9	25-40
2.36	2078	8800	80.0	20.0	15-30
0.6	1055	9855	89.6	10.4	8-22
0.075	712	10567	96.1	3.9	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ವ್ಯಾಪ್ತಿಯನ್ನೂ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಬಿ.ಬಿ.ಎಂ.ಪಿ
ಪಶ್ಚಿಮವಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು-೦೩

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Certificate No.: TC-5548

TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	322	322	2.9	97.1	95-100
22.4	2045	2367	21.5	78.5	60-80
11.2	2216	4583	41.7	58.3	40-60
4.75	2315	6898	62.7	37.3	25-40
2.36	2001	8899	80.9	19.1	15-30
0.6	1098	9997	90.9	9.1	8-22
0.075	605	10602	96.4	3.6	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

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Certificate No.: TC-5548

TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-2022-09-30-36** **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	322	322	2.9	97.1	95-100
22.4	2279	2601	23.6	76.4	60-80
11.2	2316	4917	44.7	55.3	40-60
4.75	2320	7237	65.8	34.2	25-40
2.36	1856	9093	82.7	17.3	15-30
0.6	989	10082	91.7	8.3	8-22
0.075	582	10664	96.9	3.1	0-5

* The results obtained are satisfactory as per standard requirements.

ನಿರ್ವಾಯಕ ಅಭಿಯಂತರರು

ನಿರ್ವಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ್
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-26

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TEST RESULTS OF GRADATION FOR WMM

Date: 14-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	11-07-2022
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	11-07-2022
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	242	242	2.2	97.8	95-100
22.4	2311	2553	23.2	76.8	60-80
11.2	2079	4632	42.1	57.9	40-60
4.75	2165	6797	61.8	38.2	25-40
2.36	1752	8549	77.7	22.3	15-30
0.6	1232	9781	88.9	11.1	8-22
0.075	755	10536	95.8	4.2	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-26

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Quality Manager

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	314	314	2.9	97.1	95-100
22.4	2098	2412	21.9	78.1	60-80
11.2	2196	4608	41.9	58.1	40-60
4.75	2158	6766	61.5	38.5	25-40
2.36	2001	8767	79.7	20.3	15-30
0.6	1045	9812	89.2	10.8	8-22
0.075	769	10581	96.2	3.8	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	366	366	3.3	96.7	95-100
22.4	2341	2707	24.6	75.4	60-80
11.2	2316	5023	45.7	54.3	40-60
4.75	2318	7333	66.7	33.3	25-40
2.36	1598	8931	81.2	18.8	15-30
0.6	1036	9967	90.6	9.4	8-22
0.075	702	10669	97.0	3.0	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಆಯುಕ್ತರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	369	369	3.4	96.6	95-100
22.4	2256	2625	23.9	76.1	60-80
11.2	2224	4849	44.1	55.9	40-60
4.75	2378	7227	65.7	34.3	25-40
2.36	1798	9025	82.0	18.0	15-30
0.6	945	9970	90.6	9.4	8-22
0.075	598	10568	96.1	3.9	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	345	345	3.1	96.9	95-100
22.4	2278	2623	23.8	76.2	60-80
11.2	2198	4821	43.8	56.2	40-60
4.75	2065	6886	62.6	37.4	25-40
2.36	1902	8788	79.9	20.1	15-30
0.6	1045	9833	89.4	10.6	8-22
0.075	701	10534	95.8	4.2	0-5

* The results obtained are satisfactory as per standard requirements.

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ಸಹಾಯಕ ಅಭಿಯಂತರರು
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TEST RESULTS OF GRADATION FOR WMM

Date: 14-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	11-07-2022
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	11-07-2022
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	298	298	2.7	97.3	95-100
22.4	2278	2576	23.4	76.6	60-80
11.2	2301	4877	44.3	55.7	40-60
4.75	2048	6925	63.0	37.0	25-40
2.36	1845	8770	79.7	20.3	15-30
0.6	988	9758	88.7	11.3	8-22
0.075	782	10540	95.8	4.2	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ, ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Date: 14-07-2022

Lab ID	:	**CP-2022-09-30-36**
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	11-07-2022
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	11-07-2022

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	301.4	301.4
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	70.5	67.1
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	230.5	234.1
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.2
5	Aggregate impact value	(B/A)*100	23.4	22.3
6	Aggregate impact value (Mean of two tests)	Pecentage	22.8	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID : **CP-2022-09-30-36** **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	299.6	299.6
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	68.5	69.1
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	230.5	229.7
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.6	0.8
5	Aggregate impact value	(B/A)*100	22.9	23.1
6	Aggregate impact value (Mean of two tests)	Pecentage	23.0	

* The results obtained are satisfactory as per standard requirements.

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ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-26

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	302.1	302.1
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	66.5	70.5
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	235.1	231.0
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.5	0.6
5	Aggregate impact value	(B/A)*100	22.0	23.3
6	Aggregate impact value (Mean of two tests)	Pecentage	22.7	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : CP-2022-09-30-36 **Date: 27-06-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 25-06-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 25-06-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	10.2%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	13.1%	
Combined Flakiness and Elongation Index for WMM	23.3%	

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Date: 27-06-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	25-06-2022
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	25-06-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	11.5%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	11.8%	
Combined Flakiness and Elongation Index for WMM	23.3%	

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : CP-2022-09-30-36 **Date: 27-06-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 25-06-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 25-06-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-02
Flakiness Index	14.1%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	13.2%	
Combined Flakiness and Elongation Index for WMM	27.3%	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	CP-2022-09-30-36	**Date: 27-06-2022**
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)	
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43	
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23	
Date of Receipt	:	25-06-2022	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Date of test	:	25-06-2022	

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	13.1%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	10.7%	
Combined Flakiness and Elongation Index for WMM	23.8%	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : **CP-2022-09-30-36** **Date: 27-06-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 25-06-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 25-06-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.7%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	13.1%	
Combined Flakiness and Elongation Index for WMM	25.8%	

* The results obtained are satisfactory as per standard requirements.

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ಡ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Date: 14-07-2022

Lab ID	:	**CP-2022-09-30-36**
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	11-07-2022
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	11-07-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	9.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	11.6%	
Combined Flakiness and Elongation Index for WMM	21.4%	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : CP-2022-09-30-36 **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	11.5%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	11.8%	
Combined Flakiness and Elongation Index for WMM	23.3%	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Date: 14-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	11-07-2022
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	11-07-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	13.7%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	10.4%	
Combined Flakiness and Elongation Index for WMM	24.1%	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : **CP-2022-09-30-36** **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	10.1%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.7%	
Combined Flakiness and Elongation Index for WMM	22.8%	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : **CP-2022-09-30-36** **Date: 14-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 11-07-2022

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of test : 11-07-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	17.2%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	10.1%	
Combined Flakiness and Elongation Index for WMM	27.3%	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Date: 14-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	11-07-2022
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	11-07-2022

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	17.2%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	13.1%	
Combined Flakiness and Elongation Index for WMM	30.3%	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT ON BITUMEN

Date: 18-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer's Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	15-07-2022
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-2021, IS: 1202-1220(1978) (Reaffirmed-2019)
Date of test	:	15-07-2022

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	65	60 to 70
2	Softening Point, °C	52.3	Min. 40°C
3	Ductility, cm	89	Min. 75cm
4	Flash point, °C	255	Min. 220°C
	Fire point, °C	283	

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Date: 20-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	18-07-2022
Type of Mix	:	BM-Plant (Bituminous Macadam)
Date of test		18-07-2022
Weight of Sample(gm)	:	5000

IS Sieve Size(mm)	Weight Retained(gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0	100	100
19	165	165	3.3	96.7	90-100
13.2	512	677	13.5	86.5	56-88
4.75	2759	3436	68.7	31.3	16-36
2.36	911	4347	86.9	13.1	4-19
0.3	358	4705	94.1	5.9	2-10
0.075	232	4937	98.7	1.3	0-8
PAN	63	5000	100.0	0.0	0

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS MACADAM

Date: 21-07-2022

Lab ID : CP-2022-09-30-36

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 18-07-2022

Type of Mix : BM (Bituminous Macadam)

Date of test : 18-07-2022

Table 500-6 : Physical Requirements fo Coarse Aggregate for Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	13.8	Combined Flakiness & Elongation Index for BM is Maximum 35%	IS:2386 Part I
	Elongation Index	7.2		
Strength	Aggregate Impact Value	25.2	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.51	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.17	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Date: 21-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	18-07-2022
Type of Mix	:	BM(Bitumnous Macadam)
Date of test	:	18-07-2022
Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID : CP-2022-09-30-36 **Date: 21-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 18-07-2022

Type of Mix : BM (Bituminous Mecadam)

Date of test : 18-07-2022

The results of the tests conducted on the Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

* The results obtained are satisfactory as per standard requirements.

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ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Date: 21-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	19-07-2022
Type of Mix	:	BC-Plant (Bituminous Concrete)
Date of test	:	19-07-2022
Oven Dry Weight	:	5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	89	89	1.8	98.2	90-100
9.5	702	791	15.8	84.2	70-88
4.75	895	1686	33.7	66.3	53-71
2.36	587	2273	45.5	54.5	42-58
1.18	492	2765	55.3	44.7	34-48
0.6	503	3268	65.4	34.6	26-38
0.3	528	3796	75.9	24.1	18-28
0.15	458	4254	85.1	14.9	12-20
0.075	350	4604	92.1	7.9	4-10
PAN	396	5000	100	0.0	0

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Date: 22-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	19-07-2022
Type of Mix	:	BC(Bitumenous Concrete)
Date of test	:	19-07-2022

Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID : **CP-2022-09-30-36** **Date: 22-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 19-07-2022

Type of Mix : BC (Bituminous Concrete)

Date of test : 19-07-2022

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID : CP-2022-09-30-36 **Date: 22-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 19-07-2022

Type of Mix : BC (Bituminous Concrete)

Date of test : 19-07-2022

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	–

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BM
(IS 2386:(Part I) 1963 (RA2011)

Date: 26-07-22

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd. No:4 AC-402. 1st Floor. Kammanahalli Main Road. HRBR Layout. 2nd Block. Kalyananagar. Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	25-07-22
Type of Mix	:	BM (Bituminous Macadam)
Date of test	:	25-07-22

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	501	503
2	Weight of the sample After extraction	B	483	485
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	3.59	3.58
4	Average percentage	%	3.59	

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Certificate No.: TC-5548

Lab ID : CP-2022-09-30-36

Date: 26-07-22

AFTER EXTRACTION(Trail-1)

Weight of Sample : 483 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	7.9	92.1	90-100
13.2	147	185	38.3	61.7	56-88
4.75	191	376	77.8	22.2	16-36
2.36	28	404	83.6	16.4	4-19
0.3	32	436	90.3	9.7	2-10
0.075	31	467	96.7	3.3	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 485 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	7.8	92.2	90-100
13.2	147	185	38.1	61.9	56-88
4.75	191	376	77.5	22.5	16-36
2.36	28	404	83.3	16.7	4-19
0.3	38	442	91.1	8.9	2-10
0.075	30	472	97.3	2.7	0-8

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : CP-2022-09-30-36 **Date: 27-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 26-07-2022

Type of Mix : Tack coat

Date of test : 26-07-2022

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq m	0.256	0.256
7	Average	Kg/sq m	0.256	
8	Specified Limit	Kg/sq m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : CP-2022-09-30-36 **Date: 27-07-2022**

Project Name : Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)

Agency : M S CGC Infra Projects Pvt. Ltd. No: I AC-402. 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block. Kalyananagar. Bangalore-43

Customer Reference : BBMP/EE/BTP/WO/53/2022-23

Date of Receipt : 26-07-2022

Type of Mix : BC (Bituminous Concrete)

Date of test : 26-07-2022

SLno	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	473	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.40	5.60
4	Average percentage	%	5.5	

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Lab ID : CP-2022-09-30-36 **Date: 27-07-2022**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.6	62.4	53-71
2.36	88	266	56.2	43.8	42-58
1.18	29	295	62.4	37.6	34-48
0.6	11	306	64.7	35.3	26-38
0.3	46	352	74.4	25.6	18-28
0.15	45	397	83.9	16.1	12-20
0.075	55	452	95.6	4.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	14.0	86.0	70-88
4.75	112	178	37.7	62.3	53-71
2.36	88	266	56.4	43.6	42-58
1.18	29	295	62.5	37.5	34-48
0.6	11	306	64.8	35.2	26-38
0.3	46	352	74.6	25.4	18-28
0.15	45	397	84.1	15.9	12-20
0.075	55	452	95.8	4.2	4-10

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Date: 27-07-22

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	26-07-22
Type of Mix	:	BM (Bituminous Macadam)
Date of test	:	26-07-22

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	501
2	Weight of the sample After extraction	B	482	483
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	3.60	3.59
4	Average percentage	%	3.60	

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Lab ID : CP-2022-09-30-36

Date: 27-07-22

AFTER EXTRACTION(Trail-1)

Weight of Sample : 482 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	35	35	7.3	92.7	90-100
13.2	145	180	37.3	62.7	56-88
4.75	195	375	77.8	22.2	16-36
2.36	32	407	84.4	15.6	4-19
0.3	30	437	90.7	9.3	2-10
0.075	28	465	96.5	3.5	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 483 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	33	33	6.8	93.2	90-100
13.2	149	182	37.7	62.3	56-88
4.75	190	372	77.0	23.0	16-36
2.36	32	404	83.6	16.4	4-19
0.3	34	438	90.7	9.3	2-10
0.075	35	473	97.9	2.1	0-8

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID	:	**CP-2022-09-30-36**	**Date: 28-07-2022**
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)	
Agency	:	M/S CGC Infra Projects Pvt. Ltd, No:4 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block, Kalyananagar, Bangalore-43	
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23	
Date of Receipt	:	27-07-2022	
Type of Mix	:	Tack coat	
Date of test	:	27-07-2022	

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.804	0.772
5	Weight of tack Coat (d=c-b)	Kg	0.024	0.024
6	Rate of spread of tack coat	Kg/sq m	0.267	0.267
7	Average	Kg/sq m	0.267	
8	Specified Limit	Kg/sq m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

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ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು

CIVIL Pro Sig Date BANGALORE

FOR CIVIL Pro,
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Quality Manager

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part I) 1963 (RA 2011)

Date: 28-07-2022

Lab ID	:	CP-2022-09-30-36
Project Name	:	Improvements and Restoration of Roads in Ward No. 06 (Package 02)(Package Consists of 11 Works)
Agency	:	M/S CGC Infra Projects Pvt. Ltd. No:1 AC-402, 1st Floor, Kammanahalli Main Road, HRBR Layout, 2nd Block. Kalyananagar, Bangalore-43
Customer Reference	:	BBMP/EE/BTP/WO/53/2022-23
Date of Receipt	:	27-07-2022
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	27-07-2022

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	502
2	Weight of the sample After extraction	B	472	474
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.60	5.58
4	Average percentage	%	5.6	

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ವ್ಯಾಪ್ತಿಯಲ್ಲಿರುವ ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-೨

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4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: TC-5548

Lab ID : CP-2022-09-30-36 **Date: 28-07-2022**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	6	6	1.3	98.7	90-100
9.5	75	81	17.2	82.8	70-88
4.75	120	201	42.6	57.4	53-71
2.36	67	268	56.8	43.2	42-58
1.18	32	300	63.6	36.4	34-48
0.6	15	315	66.7	33.3	26-38
0.3	38	353	74.8	25.2	18-28
0.15	29	382	80.9	19.1	12-20
0.075	63	445	94.3	5.7	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	10	10	2.1	97.9	90-100
9.5	75	85	17.9	82.1	70-88
4.75	120	205	43.2	56.8	53-71
2.36	59	264	55.7	44.3	42-58
1.18	32	296	62.4	37.6	34-48
0.6	15	311	65.6	34.4	26-38
0.3	52	363	76.6	23.4	18-28
0.15	48	411	86.7	13.3	12-20
0.075	35	446	94.1	5.9	4-10

* The results obtained are satisfactory as per standard requirements.

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End of Report

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WATER TESTING | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES

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